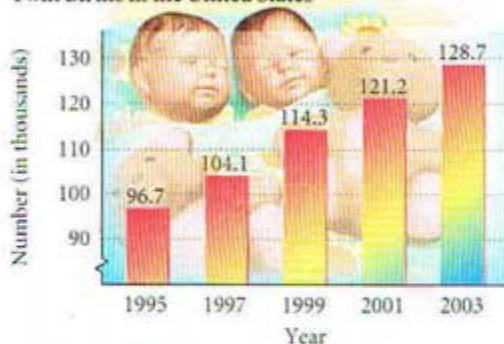


75. **Twin Births.** The graph below illustrates the upward trend in twin births.

- Model the data with a linear function. Let the independent variable represent the number of years after 1995; that is, the data points are  $(0, 96.7)$ ,  $(2, 104.1)$ , and so on. Answers will vary depending on the data points used.
- With the function found in part (a), estimate the number of twin births in 2007 and in 2010.

Twin Births in the United States



Source: National Center for Health Statistics,  
U.S. Department of Health and Human Services

76. **Triplet Births.** In recent years, the number of triplet births has increased.

- Model the data given in the table on the following page with a linear function. Let the independent variable represent the number of years after 1993. Answers will vary depending on the data points used.
- With the function found in part (a), estimate the number of triplet births in 2008 and in 2012.

Year, $x$	Number of Triplet Births, $y$
1993, 0	3834
1995, 2	4551
1997, 4	6148
1999, 6	6742
2001, 8	6885
2003, 10	7110

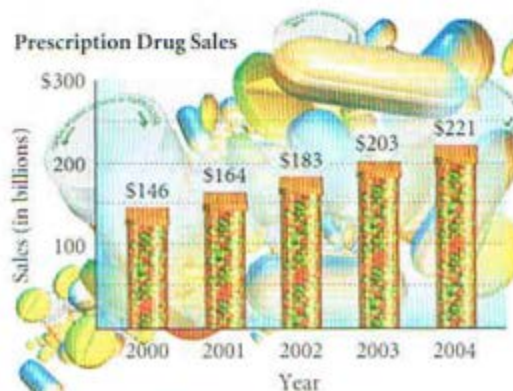
Sources: National Center for Health Statistics;  
U.S. Department of Health and Human Services

77. **Cell-Phone Bill.** Model the data given in the table below with a linear function and estimate the average monthly cell-phone bill in 2007 and in 2009. Answers may vary depending on the data points used.

Year, $x$	Average Monthly Cell-phone Bill, $y$
2000, 0	\$45.27
2001, 1	47.37
2002, 2	48.40
2003, 3	49.91
2004, 4	50.64

Source: U.S. Bureau of the Census

78. **Prescription Drug Sales.** The following graph illustrates the retail sales of prescription drugs for certain years. Model the data with a linear function, estimate the total sales for 2006, and predict the total sales for 2011. Answers may vary depending on the data points used.



Source: U.S. Bureau of the Census

79. **Social-Security Benefits.** Model the data given in the table below with a linear function, estimate the average monthly social-security benefits for retired workers in 2005, and predict the average benefits in 2010 and in 2020. Answers may vary depending on the data points used.

Year, $x$	Average Monthly Social-Security Benefits for Retired Workers, $y$
1970, 0	\$123.82
1980, 10	321.10
1990, 20	550.50
2000, 30	844.60
2003, 33	922.10

Source: Social Security Administration, *Social Security Bulletin: Annual Statistical Supplement*, 2003

80. **Sheep and Lambs.** The number of sheep and lambs on farms in the United States has declined in recent years. Model the data given in the table below with a linear function and estimate the number of sheep and lambs on farms in 2008 and in 2013.



Year, $x$	Sheep and Lambs on Farms in the United States, $y$ (in thousands)
1970, 0	20,423
1975, 5	14,515
1980, 10	12,699
1985, 15	10,716
1990, 20	11,358
1995, 25	8,886
2000, 30	7,032
2005, 35	6,135

Source: National Agricultural Statistics Service, U.S. Department of Agriculture

81. **Maximum Heart Rate.** A person who is exercising should not exceed his or her maximum heart rate, which is determined on the basis of that person's sex, age, and resting heart rate. The following table relates resting heart rate and maximum heart rate for a 20-year-old man.

Resting Heart Rate, $H$ (in beats per minute)	Maximum Heart Rate, $M$ (in beats per minute)
50	166
60	168
70	170
80	172

Source: American Heart Association

- Use a graphing calculator to model the data with a linear function.
- Estimate the maximum heart rate if the resting heart rate is 40, 65, 76, and 84.
- What is the correlation coefficient? How confident are you about using the regression line to estimate function values?